WHAT IS CLAIMED IS:

1. A cathode ray tube comprising:

a glass panel having a front side;

a funnel attached to the glass panel forming a vacuum envelope;

a fluorescent screen formed on an inside surface of the glass panel;

a shadow mask having a skirt being spaced from the fluorescent screen by a distance, the shadow mask having a short side and a long side;

a mask frame coupled to the shadow mask;

an electron gun at a neck portion of the funnel; and

a deflection yoke for deflecting electron beams emitted from the electron gun in horizontal and vertical directions, wherein a ratio (%) of a length of the skirt (S) to a length of the long side (X) of the shadow mask is in a range of about $4.1\% \leq S/X \leq 5.2\%$.

2. The cathode ray tube according to claim 1, wherein a height of the skirt on the long side of the shadow mask, XS, and a height of the skirt on the short side of the shadow mask, YS, satisfy a relation of $XS \leq YS$.

3. The cathode ray tube according to claim 1, wherein the mask frame is welded onto the shadow mask and a welding portion of the skirt of the shadow mask for welding the mask frame onto the shadow mask is formed within a distance of 3mm from an end of the skirt.

4. The cathode ray tube according to claim 3, wherein the shadow mask is welded onto an inside surface of the mask frame.

5. The cathode ray tube according to claim 1, wherein the skirt of the shadow mask includes a slit or an embossment.

6. The cathode ray tube according to claim 1, wherein an inside surface of the panel has a curvature and an outside surface of the panel is substantially flat.

7. The cathode ray tube according to claim 6, wherein an arbitrary point, P (x, y, z) on the outside surface of the panel satisfies a condition of $50,000mm \leq \frac{\sqrt{(x^2+y^2)^2}+z^2}{2z} \leq 100,000mm$.

8. The cathode ray tube according to claim 6, wherein a diagonal curvature radius of the inside surface of the panel is in a range of about 1.5R – 4R.

9. The cathode ray tube according to claim 1, wherein a diagonal curvature radius of the shadow mask is in a range of about 1.5R – 4R.

10. The cathode ray tube according to claim 1, wherein a thickness of the shadow mask is in a range of about 0.09mm – 0.17mm.

11. The cathode ray tube according to claim 1, wherein the cathode ray tube is a monitor cathode ray tube.

12. The cathode ray tube according to claim 1, wherein a ratio (%) of a length of the skirt (S) to a length of a short side (Y) of the shadow mask is $5.4\% \leq S/Y \leq 6.8\%$.

13. A cathode ray tube comprising:

a glass panel having a front side;

a funnel attached to the glass panel forming a vacuum envelope;

a fluorescent screen formed on an inside surface of the glass panel;

a shadow mask having a skirt being spaced from the fluorescent screen by a distance, the shadow mask having a short side and a long side;

a mask frame coupled to the shadow mask;

an electron gun at a neck portion of the funnel; and

a deflection yoke for deflecting electron beams emitted from the electron gun in horizontal and vertical directions, wherein a ratio (%) of a length of the skirt (S) to a length of the long side (Y) of the shadow mask is in a range of about $5.4\% \leq S/Y \leq 6.8\%$.

14. The cathode ray tube according to claim 13, wherein a height of the skirt on the long side of the shadow mask, XS, and a height of the skirt on the short side of the shadow mask, YS, satisfy a relation of $XS \leq YS$.

15. The cathode ray tube according to claim 13, wherein the mask frame is welded onto the shadow mask and a welding portion of the skirt of the shadow mask for welding the mask frame onto the shadow mask is formed within a distance of 3mm from an end of the skirt.

16. The cathode ray tube according to claim 15, wherein the shadow mask is welded onto an inside surface of the mask frame.

17. The cathode ray tube according to claim 13, wherein the skirt of the shadow mask includes a slit or an embossment.

18. The cathode ray tube according to claim 13, wherein an inside surface of the panel has a curvature and an outside surface of the panel is substantially flat.

19. The cathode ray tube according to claim 18, wherein an arbitrary point, P (x, y, z) on the outside surface of the panel satisfies a condition of

$$50,000mm \leq \frac{\sqrt{(x^2+y^2)^2}+z^2}{2z} \leq 100,000mm .$$

20. The cathode ray tube according to claim 18, wherein a diagonal curvature radius of the inside surface of the panel is in a range of about 1.5R – 4R.

21. The cathode ray tube according to claim 13, wherein a diagonal curvature radius of the shadow mask is in a range of about 1.5R – 4R.

22. The cathode ray tube according to claim 13, wherein a thickness of the shadow mask is in a range of about 0.09mm – 0.17mm.

23. The cathode ray tube according to claim 13, wherein the cathode ray tube is a monitor cathode ray tube.

24. A cathode ray tube comprising:

a glass panel having a front side;

a funnel attached to the glass panel forming a vacuum envelope;

a fluorescent screen formed on an inside surface of the glass panel;

a shadow mask with a color selection function and having a skirt with a welding portion, the shadow mask being spaced from the fluorescent screen by a distance and having a short side and a long side, wherein a height of the skirt on the long side of the shadow mask, XS, and a height of the skirt on the short side of the shadow mask, YS, satisfy a relation of $XS \leq YS$;

a mask frame in the shadow mask, wherein the mask frame is welded to the shadow mask and the welding portion of the skirt of the shadow mask for welding the mask frame to the shadow mask is formed within a distance of 3mm from an end of the skirt;

an electron gun at a neck portion of the funnel; and

a deflection yoke for deflecting electron beams emitted from the electron gun in horizontal and vertical directions,

wherein a ratio (%) of a length of the skirt (S) to a length of the long side (X) of the shadow mask is $4.1\% \leq S/X \leq 5.2\%$;

wherein a ratio (%) of the length of a skirt (S) to a length of the short side (Y) of the shadow mask is $5.4\% \leq S/Y \leq 6.8\%$.

25. A cathode ray tube comprising:

a glass panel having a front side;

a funnel attached to the glass panel forming a vacuum envelope;

a fluorescent screen formed on an inside surface of the glass panel;

a shadow mask having a skirt being spaced from the fluorescent screen by a distance, the shadow mask having a short side and a long side;

a mask frame coupled to the shadow mask;

an electron gun at a neck portion of the funnel; and

means for deflecting electron beams emitted from the electron gun in horizontal and vertical directions, wherein a ratio (%) of a length of the skirt (S) to a length of the long side (X) of the shadow mask is in a range of about $4.1\% \leq S/X \leq 5.2\%$.

26. A cathode ray tube comprising:

a glass panel having a front side;

a funnel attached to the glass panel forming a vacuum envelope;

a fluorescent screen formed on an inside surface of the glass panel;

a shadow mask having a skirt being spaced from the fluorescent screen by a distance, the shadow mask having a short side and a long side;

a mask frame coupled to the shadow mask;

an electron gun at a neck portion of the funnel; and

means for deflecting electron beams emitted from the electron gun in horizontal and vertical directions, wherein a ratio (%) of a length of the skirt (S) to a length of the long side (Y) of the shadow mask is in a range of about $5.4\% \leq S/Y \leq 6.8\%$.